

# ***ASSESSMENT OF INSTITUTIONAL DEVELOPMENT ACTIVITIES: BOLFOR***

Technical Document 39/1996

June 1996

# ***Assessment of Institutional Development Activities: BOLFOR***

Proyecto BOLFOR  
Calle Prolongación Beni 149  
Santa Cruz, Bolivia

USAID Contract: 511-0621-C-00-3027

Preston S. Pattie  
Ph.D., Agricultural Economics  
Chemonics International

June, 1996

*BOLFOR is funded by USAID and the Bolivian Government, and is implemented by  
Chemonics International, with technical assistance from Conservation International,  
Tropical Research and Development and Wildlife Conservation Society*

---

## TABLE OF CONTENTS

---

	Page
SECTION I	INTRODUCTION
	I-1
A.	Objectives
	I-1
B.	Expected Outputs
	I-1
C.	Tasks and Activities
	I-2
SECTION II	INSTITUTIONAL DEVELOPMENT AND BOLFOR PROJECT DESIGN
	II-1
A.	Review of Project Goal and Purpose
	II-1
B.	Identification of Key Functional Areas
	II-2
SECTION III	REVIEW OF CURRENT INSTITUTION BUILDING ACTIVITIES
	III-1
A.	Human Resources Development
	III-1
B.	Natural Forest Management
	III-2
B1.	Research and Development
	III-2
B2.	Capture and Dissemination of Technical/Scientific Information
	III-3
B3.	Development of Management Plans
	III-4
B4.	Certification Mechanism
	III-5
B5.	Public Regulation of the Industry
	III-8
C.	Products, Markets and Enterprise Management
	III-8
D.	Policy Analysis and Institutional Development
	III-10
D1.	Policy Analysis and Dialogue
	III-10
D2.	Institutional Strengthening
	III-13
D2a.	MDSMA
	III-14
D2b.	FONAMA
	III-14
D2c.	CNF
	III-14
D2d.	PROMABOSQUE
	III-14
D2e.	CADEX
	III-16
D2f.	CICOL
	III-16
D2h.	CDF/Santa Cruz
	III-17

SECTION IV	AN INSTITUTIONAL DEVELOPMENT STRATEGY FOR BOLFOR	IV-1
A.	Priorities Central to Achieving Project Objectives	IV-1
B.	Criteria for Providing Support to Future Activities	IV-1
B1.	Criteria #1: Strengthen Activities Most Central to the Focus of BOLFOR	IV-2
B2.	Criteria #2: Sustainability of Investments in Institutions	IV-3
B3.	Criteria#3: Contribution to International Awareness and Dialogue	IV-4
B4.	Criteria#4: Interinstitutional Coordination	IV-4
B5.	Summary of the Criteria for Under- taking Future "Investments" in Institutional Development	IV-5
C.	Recommended Institutional Development Strategy	IV-6
C1.	General Observations and Recom- mendations	IV-6
C2.	Specific Recommendations	IV-7
C3.	Comments on 1996 Work Plan	IV-9
D.	Results-Oriented Monitoring and Evaluation	IV-13
Annex I:	Organizations Currently Involved with BOLFOR	AI-1

---

## SECTION I INTRODUCTION

---

The overall purpose of the BOLFOR project is to strengthen the capacity of the private and public sectors in Bolivia to develop and implement sustainable and certifiable natural forest management. Since the onset of the project, many organizations have received support through BOLFOR's technical assistance, training, and financing. This support has varied from the installation of a geographic information system, the development of a strategic plan, the provision of scholarships, financing of research projects, the establishment of a local certification organization, a course on administration for indigenous groups, and others. However after two years of project implementation, little effort has been made to assess if the activities supported by the project will have the intended impacts and meet the overall purpose of the project. As government policies in natural resources and environment and the decentralization of public administration take shape, this analysis to define BOLFOR's future role in institutional development takes on increasing importance.

### **A. Objectives**

The assessment was undertaken to determine the extent which current project activities will lead toward the achievement of its overall purpose, how the project can further or improve upon its activities to assure the institutional sustainability and how the project should be evaluated in this area.

### **B. Expected Outputs**

Within the context of BOLFOR, "institutional development" is not limited to the Policy and Institutional Analysis and Development Component of the Project, but instead is interpreted in a broad context. Besides strengthening specific organizations, all relevant functions related to natural forest management should be considered, including: preparation and supervision of management plans, certification mechanisms, product improvement, enterprise development, policy analysis, human resource development, information systems, research, technical assistance, and others. Expected outputs of the assessment are defined with this broad interpretation in mind:

- C Documentation of current institutional strengthening activities of the project.
- C An assessment if these activities will lead to the completion of the overall purpose of the project.
- C Recommendations on how BOLFOR can improve upon the ongoing activities and criteria it should use to determine which activities to undertake.

- C Recommendations on how to monitor and evaluate these activities, oriented toward results, rather than toward inputs.

### **C. Tasks and Activities**

The following steps were defined in conjunction with the BOLFOR Chief of Party, constituting a schematic work plan for the assignment:

1. Review project documentation related to BOLFOR design concept, project purpose, strategy, organization, and current and planned activities.
2. Interview project staff and meet with members of the Project Administrative Board and CDF<sup>1</sup>.
3. Define the functional areas involved in a system of sustainable natural forest management in Bolivia.
4. Recommend criteria for determining future investments in institutional strengthening.
5. Hold a workshop with BOLFOR staff to review and reach consensus on the proposed criteria, and examine implications for future project activities.
6. Develop a general institutional development strategy for the project, based on functional areas and investment criteria, forming a guide for specific recommendations regarding institutions and project activities.
7. Define a process to monitor and evaluate the results of BOLFOR activities related to institutional strengthening.

---

<sup>1</sup> At the time of the writing of this report, CDF was in process of transition to DIFOR. Therefore, any mention of the former (CDF) refers to DIFOR.

---

## SECTION II

### INSTITUTIONAL DEVELOPMENT AND BOLFOR PROJECT DESIGN

---

#### A. Review of Project Goal and Purpose

The goal of the BOLFOR project is to "reduce degradation of forest, soil and water resources and to protect the biological diversity of Bolivia's forests". Degradation is primarily related to the conversion of forest lands to agriculture and grazing, the over harvest of a limited number of species of trees leading to their disappearance from many forests, the over harvest of wildlife, and other disturbances to the ecology. Low values placed on Bolivian forests limit incentives to effectively manage resources. Causes include low value added to timber and non-timber products, lack of efficiency in industry and commercial operations, high transportation costs, and insecure rights over resource use.

The project purpose is to "build Bolivian public and private sector capacity to develop and implement programs for sustainable forest use." Management of natural production forests was practically nil in Bolivia (and much of the tropics in the world) at the time the project design was developed. It was generally perceived that an expanded institutional base and policy framework would be needed, but the central focus of the project was given to a more hands-on approach of carrying out research, motivating the industry to adopt new practices and engage in forest management, taking advantage of incentives such as green marketing systems. The structure of the project is made up of three components with three additional supporting elements, as follows:

#### *Components*

- Natural Forest Management
- Product and Market Development
- Policy and Institutional Analysis and Development

#### *Supporting Elements*

- Research Coordination
- Training Coordination
- Environmental Monitoring & Evaluation, Communications & Networking

Since the time the project was designed, the policy agenda of the country has moved forward with the consolidation of the Ministry of Sustainable Development and Environment, the Popular Participation and Decentralization processes, environmental quality control legislation, and other initiatives. Capitalization, education reforms, and modernization of the State continue to move ahead in defined directions, making the role of the public and private sectors more clear each time.

At the sectoral level, however, a great deal of confusion still exists in the roles to be carried out by institutions at the central, departmental, and municipal levels, the rights of groups such as indigenous populations and other residents in forested areas, and rights and responsibilities of forest concessionaires and land owners. Various versions of the forestry law continue to circulate. This particular stage of definition of a new institutional framework provides special opportunities for objective technical orientation of the kind that the BOLFOR Project is able to offer.

## **B. Identification of Key Functional Areas**

A useful first step in developing a coherent strategy for institutional development, is the identification of the activities and functions which should be carried out within a complete management system. It is, after all, the implementation of these functions which is of interest, rather than strengthening specific organizations *per se*. In fact it is the effective implementation of the functions that provides evidence that the institutions are, indeed, stronger.

With this intention, a listing of functional areas related to natural forest management was developed. While not pretending to be the final word on the subject, the list below serves as a guide to the various activities to be carried out within a system of NFM, including as few references as possible as to which kind of institution--public or private--should be primarily responsible. Only some of these activities would receive BOLFOR support, in accordance with the focus and priorities of the project, as well as its budgetary limitations. A set of criteria for guiding decisions to assign resources to different institution building activities is discussed later. (See Section IV.)

### **FUNCTIONAL AREAS OF IMPORTANCE TO BOLFOR**

#### *Research on Sustainable Forestry Management*

- Financing sources and mechanisms
- Definition of priorities, research agenda
- Development of research methodologies
- Socio-economic and multidisciplinary research
- Capture of technical/scientific information from other sources
- Maintenance of data bases, documentation
- Distribution of findings
- Evaluation

#### *Development and Implementation of Management Plans*

- Development of concepts and norms
- Inventories: methods, required accuracy
- Ecological indicators
- Formats, standards, definition of content, level of detail, procedures
- Supervision: Continuous or intermittent



Audits: Terms of Reference, cost, contracting, supervision and acceptance  
Mapping requirements

### *Product and Market Development*

Processing new species  
Quality enhancement and control  
Information systems on markets and clients  
Market identification, contacts  
Attracting additional investment  
Input and equipment suppliers and services  
Promotion of other uses of forest resources, such as eco/ethnotourism  
Technology transfer

### *Certification Mechanism*

Specifications or norms: TOR's for management plans  
Promotion and orientation regarding the Certification process  
Technical inspection and recommendation  
Supervision and verification  
Chain of custody  
Cohesion and support of international certification systems

### *Human Resource Development*

University training  
Preparation of theses, research papers, and such  
Technical training at different levels: rural residents, workers, specialized technicians, administrative personnel, and professionals  
Training in related fields: economics, sociology, finance, administration, and others  
In-service training  
Curriculum Development

### *Policy Analysis and Framework*

Incentives to maintain and manage forests  
Clarity of property and usufruct rights  
Public investments in infrastructure  
Stumpage charges and taxes: levels and methods of collection  
User fees and other charges for services  
Concession contracts: length, limitations, conditions  
Intersectoral influences  
Land conversion

Ecological management and degradation  
Representation of the forest sector and other stakeholders in policy dialogue

*Indigenous Groups and other Residents in Forested Areas*

Organizational and administrative support  
Participation of population in decisions  
Property and usufruct rights  
Economic participation

*Regulation*

Supervision of concessionaires and private land owners  
Monitoring mechanisms  
Policing illegal activities  
Wildlife monitoring and protection  
Pollution and environmental quality  
Control of fires and other practices  
Land use planning and zoning enforcement

*Public Awareness and Interest*

Incidence of costs of public services  
Perceived benefits of biodiversity  
Extension and Adult Education  
Mass awareness campaigns

*Enterprise Development*

Management and Administration  
Business plans and obtaining capital  
Cooperative development or other participatory forms of organization  
Cost control business decisions  
Feasibility studies  
Marketing and diversification strategies  
Collective action for provision of services

Reference will be made to this listing later in this report, especially in Section IV dealing with the development of an institutional strengthening strategy. Meanwhile, Section III provides an analysis of current activities of the project, identifying the ways in which they contribute to institution building, identifying potential problems, as well as providing insights about other opportunities or needs which BOLFOR could help fulfill.

---

### SECTION III

#### REVIEW OF CURRENT INSTITUTION BUILDING ACTIVITIES

---

##### **A. Human Resources Development**

Each of the major components of the project includes activities and targets in human resources development, related to long- and short-term training abroad as well as in-country courses and workshops. In addition, the BOLFOR staff take seriously the task of on-the-job training of personnel in local institutions which are involved in carrying out related activities, many with project support.

BOLFOR will leave behind 12 graduate-level professionals, as well as more than 25 persons exposed to international courses, seminars and workshops in technical areas related to sustainable natural forest management. Further, the BOLFOR research program, through financial and logistical support and on-the-job orientation is assisting in the completion of more than 80 degrees at the B.Sc. level in local universities and numerous international degrees. The strategy is to increase the number of trained personnel in the sector, as the availability of highly trained professionals in the sector will undoubtedly have a large impact on the form and effectiveness of institutions to define policy, manage forests, operate businesses, and also to train additional professionals.

In-country seminars and workshops are programmed over the life-of-project to reach more than 1,500 professionals in the public and private sectors. Besides the development of human resources, many of these activities are designed and carried out to orient and assist in institutional development, as follows:

- C      31 research seminars to disseminate research results and to foster interaction among cooperating institutions.
- C      16 technical training modules to educate concession operators to successfully implement sustainable forest management.
- C      3 diploma course sessions to expand the national curriculum in forest resource and ecosystem management through institutional strengthening.
- C      13 policy and certification workshops or seminars to create awareness and facilitate consensus among GOB officials and representatives of collaborating institutions regarding forestry policies.
- C      8 product development and marketing workshops or seminars to assist interested firms in expanding markets for certifiable forest products.

- C 1 internationally recognized natural forest management conference to promote international interest in forest management research.

The project design does not go farther in strengthening the institutions which would build human resource capacity in the future, such as developing the universities' capabilities to train foresters or supporting the ETSFOR technical school. It might be useful for BOLFOR to provide additional perspective in this area by projecting the demand for professionals and technicians in forestry and related fields in the future, given the expected increase in activities related to natural forest management.

It is also suggested that more emphasis be placed in the forestry curriculum of Bolivian universities on administration, personnel management, and natural resource economics. This broader focus of curricula would be consistent with the strategy whereby the trained cadre of professionals will be influential in defining the roles of institutions and policies for the future.

## **B. Natural Forest Management**

### **B1. Research and Development**

Research is carried out under the project in close collaboration with Bolivian and international organizations participating in the project. In Bolivia, the Museum of Natural History Noel Kempff Mercado of the UAGRM, the Universidad JMS of Tarija, the Instituto Ecológico of the UMSA in La Paz, as well as World Wildlife Fund have all participated actively. International collaborators in the Chemonics Consortium include Wildlife Conservation Society, Tropical Research and Development, and Conservation International. A great many studies are carried out by local investigators to comply with the requirements of the B.Sc degree in forestry and related disciplines from Bolivian universities.

Continued research into the practices to achieve sustainable forest management will be needed into the distant future. Besides the need to gain a better understanding of the regeneration habits of timber species (growth and yield, silvicultural studies), there is a dearth of ecological indicators currently incorporated into management plans. Instead of requiring forest operators to achieve a given ecological indicator, management plans usually resort to requiring that certain practices be followed, working on the assumption that the ecological goals will thereby be attained.<sup>1</sup> Only continued investigation over time can establish the connection between the recommended practices and the long-term ecological impacts. This kind of research is of critical importance to the future validity of a sustainable NFM system.

Few local organizations were actively engaged in NFM research before, and those that participate are underfinanced. No organization currently takes the lead in developing a research agenda to meet the requirements of the NFM system. The financing of a research system is part of the debate over the new forestry law. If a new financing mechanism is instituted to support

---

<sup>1</sup> See "Biological Challenges of Certification of Tropical Timber," F.E. Putz and V. Viana, CIFOR, February, 1995.

services such as research, such as by assigning a percentage of funds from forest sector revenues, the issue of control of the research agenda becomes crucial. A single organization to provide these services in the future is unlikely. An open, participatory approach is necessary, which would allow for representation of the various stakeholders, for example:

- \* Concessionaires and private land owners
- \* Forest user groups (indigenous peoples)
- \* Representatives of the certification mechanisms
- \* MDSMA
- \* Regional forest service, LABONAC
- \* Cámara Forestal/PROMABOSQUE, Cámara de Exportadores, BOLINVEST
- \* Regional government and municipalities
- \* Universities and the scientific community as providers of services

Thus a private/public system based at the regional level might be an effective model. Regional boards would determine the allocation of funds for different projects/experiments/organizations. If the source of funding comes primarily from forestry concessions, then only five departments would be involved--Santa Cruz, Beni, Pando, La Paz and Tarija. Such an approach excludes the informal forestry sector. The model probably also requires a national focus for capture of information and contacts from outside, as well as maintenance of information databases and libraries.

Certainly there is nothing in the project description to indicate that BOLFOR should take a major role in helping set up such a system. However providing some support in this direction would be consistent with the project purpose, and with conditions in the country as described in Section II above.

## **B2. Capture and Dissemination of Technical/Scientific Information**

Besides the results of research performed locally, BOLFOR has access to a great deal of information available internationally, and the project maintains research data bases and a library on NFM. BOLFOR does not attempt to duplicate trade statistics, as these are already maintained by CADEX. Further, BOLFOR is assisting CADEX to become an INTERNET node to provide information and communications services to its members, including a trade network.

The continuity of such services is of vital importance, and any steps that can be taken well before the end of the project, would be wise. Maintaining databases and documentary information can be a thankless task, and experience in relying on central government agencies to provide continuity in scientific/technical information services has been disappointing in Bolivia and elsewhere. Rather than vesting this responsibility in one organization, it is perhaps best to broaden access among several organizations. These might include more than one at the regional level and at least one at national level, for instance: universities in Santa Cruz, Beni, Cochabamba and La Paz, PROMABOSQUE, CADEX and others. Indeed PROMABOSQUE has already established four databases with the help of BOLFOR.

Dissemination of technical information is even a more difficult activity because of its heavy operating costs. Projects like BOLFOR can assist in this regard by giving published information wide distribution.

### **B3. Development of Management Plans**

The development and application of sustainable forest management plans is the central theme of BOLFOR--hence the target of placing 25 percent of the forest area of Santa Cruz under sustainable management by the end of the project. Forest industry concessionaires and indigenous groups are the primary focus of these efforts, although there is rising interest among individual landowners as well. Up to now, the policies have been to allow lumber companies to focus on the harvest of trees, without taking a longer-term view toward sustainable management of the resources.

Forest inventories and management plans have been developed for some of the Lomerío communities, and the process of obtaining international certification for the managed forests is underway. BOLFOR has established a Geographic Information Laboratory to assist in developing these initial management plans, and through this effort, the Laboratory will establish formats, scales, and other standards regarding the detail of information and its form of presentation to be required.

Lumber companies are taking more interest in sustainably managing forest concessions, and in availing themselves to the assistance which BOLFOR can provide. Generating this initiative on the part of the private sector is key to success of the project, since sustainable NFM is an option that was not even considered by most firms a short time ago. BOLFOR follows a policy of providing support only to those firms that wish to place forests under sustainable management plans.

Lumber companies are taking more interest in sustainably managing forest concessions, and in availing themselves of the assistance which BOLFOR can provide, an initiative on the part of the private sector not even considered by most firms a short time ago.

In the future, forest inventories and management plans could be contracted to specialized private firms. BOLFOR might have a role in helping some of these firms get started in this area. Ideally market incentives would be sufficient for private operators to benefit directly from managing forests without the need for special supervision or regulation. However the very long life cycle of timber species, unstable policy framework, and the low productivity of tropical forests often make the future benefits of forest management less attractive than alternative investments. The full value of forest resources is not accounted for by the individual lumber company of today, and sound business judgements cannot be based on external benefits, including those of the distant future. Because of these limitations, it is generally felt that sustainable NFM must be incorporated into a system which will provide independent oversight of the development and compliance with management plans for each specific forest area.

One system is simply passing such requirements into law and charging the government to supervise all forest activities in the country. Putting such a scheme into practice has obvious problems. Certainly there is a place for the political authority of the government, especially in the definition of property rights, boundaries, rights over the usufruct of resources, fiscal obligations, etc. However it is naive to believe that government can effectively and consistently impose a great number of requirements which run against the interests of lumber companies, informal timber harvesters and traders, private landowners, rural residents, indigenous groups, and others. The more favorable and pronounced the market incentives, the greater the chances of achieving sustainable use of the resources. In fact the government can do a great deal toward making markets behave as desired, as will be discussed later.

Another system which has emerged recently arose in conjunction with boycotts of tropical forest products in consuming countries concerned about degradation of the earth's ecology, particularly with deforestation in the tropics. This system is based on certified or green labeled products from sustainable managed forests would then become the only tropical forest products allowed into these niche markets, presumably for a premium price. The system is picking up with vendors in other markets, using the green label as a means of product differentiation and image enhancement.

Development of the certification mechanism in Bolivia is one of the outputs expected of the BOLFOR project. Strengthening the government's technical capabilities to supervise the management of forests is another. One of the keys will be to implement these systems in a complementary manner, to avoid unnecessary duplication and confusion, and avoid stretching public responsibilities beyond available resources. Below the certification mechanism is first discussed, then other options for government regulation of the industry through a new forest service.

#### **B4. Certification Mechanism**

The CFV (Bolivian Council for Voluntary Forest Certification) has been established with direct technical assistance of BOLFOR, and is posturing for recognition by the Forestry Stewardship Council as its official representative in the country. Besides the Forest Stewardship Council, CFV will work with other credible and legitimate certifying schemes which become active in the region. As the local nexus of the certification mechanism, CFV would establish forest management norms appropriate to local conditions, promote sustainable forest management, and facilitate communications with certifying agencies and forest managers regarding development and monitoring of management plans. The CFV will need funding and further assistance to effectively carry out its mission.

International certification or green labeling is relatively new, and began among outcries from environmental groups and concerns of the scientific community and public at large. As the concept became popular, several organizations became involved, leading to competing programs and the possibility of contradictory standards of what constitutes sustainable management. In some cases, vendors apparently made claims based on green labels of little substance. "The trade already uses a number of labels, which is unfortunate as they are not regulated by an independent

certifying body. Reputable retailers in the UK and elsewhere increasingly reject such labels as misleading."<sup>2</sup> The Forest Stewardship Council is an attempt to provide order to the system. Until one system gains wide recognition, competing claims can be made, especially where markets are open to tropical forest products in general, such as in the USA. In fact, as green labeling becomes more successful, the incentive to make similar claims is greater. Some vendors may even feel that having a different green label allows them to differentiate their products even more, rather than using the same green label as their competitor.

The term "certified" generally implies an independent testing authority in which the consumer can place his/her faith, and it is important to conserve the validity and credibility of this concept. In markets which are closed to non-sustainable produced tropical forest products, such as some in the EEC, one authority can recognize certain systems and labels and allow only these within its borders. This demonstrates the fundamental purpose of involving government in certification programs: for the political authority to exclude false copies--those making false claims who can discredit the system. It also demonstrates that certification is basically a market mechanism, and its application should be oriented to enhance market incentives and signals.

Lacking the authority to close markets and outlaw competitors, certification can still prosper. Quality control systems operate in various industries to certify the standards of products. In agricultural seeds, for instance, there are successful examples of private, public, and mixed certification mechanisms. It is possible that forest product certification can even thrive with different competing systems at work, however, there are some important characteristics of SNFM certification that should be considered.

Up to now the boycotts of tropical forest products and the certification systems to penetrate these niche markets are both promoted by ecological groups. Private industry and the International Tropical Timber Organization (ITTO) have not fully embraced these concepts. Agricultural seed certification also began with the scientific community, but after a time gained enthusiastic support, including financial backing, from the industry as it became apparent that certification had the effect of expanding the market for seed. In the forest industry, however, the ecological groups might be seen as working to actively close markets, rather than expand them, possibly making it difficult to obtain industry support that will likely be needed to ensure continuity of SNFM certification.

The strategy promoted by ITTO is to reach agreement among all exporting and importing nations to require all tropical timber products to be derived from sustainably managed forests. This approach is similar to that of applying general industry standards, such as safety standards or minimum quality requirements across an entire industry. The concept behind such an approach is consumer protection. The assumption is that the consumer cannot discern through his/her own power of observation and judgement the condition and quality of the product. In order to reduce the possible harm that may come from purchasing and using products making false claims, all products are required to meet the standards. The harm in this case is, of course, the degradation of the

---

<sup>2</sup> Incentives and Sustainability--Where is the ITTO Going? WWF position paper, November, 1991.



environment which occurs as a result of purchasing products from non-sustainably managed forests. Quality control mechanisms for consumer protection are normally sponsored by governments, and are required industry-wide.

The consumer protection approach would require management practices industry-wide to reduce degradation of the environment as a result of purchasing products from non-sustainably managed forests. Although theoretically appropriate, implementation is often weak.

Voluntary certification, on the other hand, is often used to differentiate products of some vendors from those of others. For this kind of certification to work, it is assumed that only some vendors have products from SNFM sources. Therefore this approach to certification assumes that only a portion of the tropical forests are managed in a way that would meet the certification standards. Just as seed certification distinguished seed from grain, certification would distinguish SNFM products from other tropical forest products which are less well managed. This approach is a market development approach to certification, which is often embraced and backed by industry. Government authority is frequently used to help manage the system, and particularly to unify the system into a single administration, outlawing false claims and copies by competing private systems.

Voluntary certification may assume that only some vendors have products from SNFM sources, therefore that only a portion of the tropical forests are managed in a way that would meet the certification standards. This approach is useful in market penetration and expansion, and is more likely to receive backing from industry.

The hope is that both of these concepts could be applied to the SNFM situation and become complementary--for instance the government might require minimum standards while voluntary certification applies more rigorous standards. However the claims of the green label could become confusing to the consumer: "sustainable" versus "more sustainable?"

It is also worth examining the position and role of international ecological groups in the certification system. Some of the same groups which have shaped public opinion and inspired authorities to limit market access for tropical forest products are the same ones that offer certification services, a potentially self-serving chain of control. International ecological organizations can be subject, just as any other, to entrenchment of leadership. For all the merit of the current system, its leaders must look to the future and nurture a system that will continue to be above suspicion over the long-run.

Although many of these questions go beyond the scope of BOLFOR, it is important for the project to contribute to the international dialogue and strategy, while tailoring its own approach and mechanism to be implemented in Bolivia. Such reflection and discussion also helps BOLFOR better support the complementarity between the voluntary certification mechanism and the public regulation and support to the forest sector.

## **B5. Public Regulation of the Industry**

Bolivian authorities are considering the implementation of forest management plans, which would be required of concessionaires and perhaps other private land owners with forest stands. Such a system is contemplated in the current (1974) law, but has not been enforced. BOLFOR is advising the central government and the department of Santa Cruz in specifying the processes needed in such a system. The parts of the system include development and approval of management plans, supervision to ensure compliance, fiscalization and collection of public revenues, and punitive action in cases of non-compliance or abuse.

Many questions remain open on how best to create the appropriate services at the departmental and central levels. It is believed that technical activities related to management plans can be separated from the fiscal and revenue functions and also from the policing functions. Development of management plans, including forest inventories and ecological indicators, would be the responsibility of the concessionaires and private land owners. It is not clear how to finance the cost of supervising or auditing the plans. The measure taken should be compatible to the extent possible with the voluntary certification system.

Another question is in regard to the capability of the public forest service to judge the adequacy of plans for their approval. If the financing for development of plans and for their supervision comes from the industry, much of the control over the content of the plans and rigor of the supervision could also be subject to the interests of forest enterprise operators. For example, ecological indicators in management plans would be of little benefit to forest managers, since inclusion of such indicators may only imply more rigorous management requirements.

In providing support to the organization of a new institutional structure, BOLFOR is faced with an additional dilemma: several topics of concern to the forestry sector fall outside management of concessions. Among these are forests on private lands outside of concessions, communal forests, fire prevention and control, fish and wildlife services, and administration of land use plans (including land clearing to convert land to other uses).

It is increasingly apparent that the first reaction to misuse and abuse of natural resources is most often at the local level, where people are most directly affected. Municipalities are becoming more active under the Popular Participation Law. The role municipalities will have in mechanisms for response and defense of natural resources has not been defined.

## **C. Products, Markets and Enterprise Management**

BOLFOR efforts are focused on those enterprises which are practicing SNFM, and were therefore limited to Lomerío until recently. Activities will now be expanded to include six additional private firms operating on eight different forest concessions. BOLINVEST and CADEX have been active in this field, with international projects financed by USAID and UNDP, respectively.

A central theme of BOLFOR product development activities is to help industry expand the utilization of species to include the more abundant types under sustainable management principles. This practice would allow loggers a reasonable profit margin while avoiding the total removal of select high-value species. The comparative advantage of harvesting only select high-value species, leads to their possible extinction, affecting other elements of the ecology which are interdependent upon them. Ideally this approach also would increase industry revenues, making SNFM more feasible, and would increase the value of natural forests for production, helping prevent the conversion of land resources to other uses.

Currently profit margins for export of raw lumber of mahogany (locally referred to as mara or caoba) are high compared to other species. In fact, utilization of many other species is economically feasible only if marketed through secondary or final products, such as flooring, doors or furniture. Value is increased while shipping weight is decreased at the same time.

Not all observers are convinced that the widening utilization of species is the best approach. Some have noted<sup>3</sup> that the highly selective harvesting currently practiced has a low impact because of few trees taken and leaving forests undisturbed for longer periods of time. It has also been suggested that greater utilization of natural stands may lead to further depletion of the resource and may help defray some of the costs of land conversion to agriculture and grazing.

It appears that there is no one right answer or single strategy which would apply to all cases. Certainly where land has alternative uses which provide higher returns and greater land values, even in the short- and medium-term, pressures to convert to alternative uses will be great. Increasing the utilization of natural stands without SNFM being seriously practiced, such as limiting annual cut to annual production, would only facilitate the process of conversion. The hope is that with SNFM and greater utilization of timber and non-timber forest products, and perhaps other uses such as tourism, maintenance of forests and biodiversity becomes relatively more attractive compared to other uses of the resources. It seems unlikely that the utilization of lower-valued, more abundant species in Bolivia will become so massive in scale that forests would be greatly affected. Again, any such generalizations need to be examined in the context of particular situations, with regard to given species at specific sites, and within the context of the economics of the industry as it changes over time.

Expanding the utilization of species to include the more abundant types under sustainable management principles would avoid the total removal of select high-value species. But where land has alternative uses which provide higher returns and greater values, increasing the utilization of natural stands without SNFM being seriously practiced would only facilitate the process of conversion.
---

Product and market development require serious long-term investments on the part of industry, and BOLFOR is limited in terms of the impact it can expect to make. Therefore the

---

<sup>3</sup> Forestry Sector Review, World Bank, December, 1992.

approach is to link SNFM to markets, with emphasis on products, rather than enterprises. With regard to products, BOLFOR will assist in increasing efficiency, controlling costs, quality enhancement, gaining access to markets, and green marketing. Market logistics, including physical distribution and cost reduction are included, as well as the custody mechanism for certified forest products. It has been clarified, however, that certification should be viewed as a mechanism to enhance SNFM, rather than an end in itself. The reason for setting number of products under certification as a BOLFOR target is simply to link project efforts to the market. However any production coming from sustainably managed forests is valid to meet BOLFOR targets.

Product development--including quality, costs, and market access--will necessarily involve virtually all aspects of business management. However the theme of enterprise development within the context of BOLFOR, even with regard to less advantaged firms such as enterprises run by indigenous groups, does not fit clearly within the project. Within a healthy expanding industry, it is natural for some enterprises to fail while new ones are created. Some adjust to changing market conditions, while others do not. Some receive capital investments and expand product lines while others do not. Market forces and entrepreneurial initiative must be allowed to guide the decision of enterprise managers over the long run. By the same token, market development activities, such as creating brand name recognition for Bolivia's forest products or expanding market recognition of new species important to Bolivia, probably falls outside the scope of the project.

This is not to say that support services are unimportant to the industry. Instead, BOLFOR should concentrate on institutionalizing support services within the industry. With this objective in mind, the project has helped PROMABOSQUE develop its strategy and operating plan, and is assisting in the administration of this institution. PROMABOSQUE is the technical arm of the Cámara Nacional Forestal (CNF), the primary organization which represents the forest industry in Santa Cruz and the country.

The CNF through PROMABOSQUE is one of the most appropriate institutions to deliver technical services to the industry, especially regarding production efficiency, product development and quality control. Public organizations such as LABONAC, a wood products laboratory in Santa Cruz under CDF, has infrastructure and equipment which can likely be available for particular activities. Typically organizations of this kind will not have the budget to become a regular and active provider of services to the industry, but instead would participate in research programs or other services through special agreements with industry organizations, such as CADEX or PROMABOSQUE. BOLINVEST has assisted a number of enterprises obtain investment capital, and in secondary processing, particularly of furniture, and in exporting.

## **D. Policy Analysis and Institutional Development**

### **D1. Policy Analysis and Dialogue**

One of the most visible targets of the BOLFOR project is to assist with development of a new forestry law. BOLFOR's role in this process has been to present alternatives on the various

issues--public regulation of the industry, fiscal systems and administration of concessions, and the informal lumber sector, to mention a few--and help public officials and others consider the possible outcomes and impacts that might result. As the debate over different versions of the law continue, the primary issues have become increasingly clear. Reaching consensus and achieving approval of the law is obviously beyond control of the project. With or without a new law, however, sectoral policies can emerge and the technical and administrative systems must be reorganized to define rights and responsibilities of different players in the forest sector. BOLFOR should continue to contribute in this reform process through policy analysis and dialogue. Further analysis on the subject of fiscal alternatives and their impact on concession administration is a primary topic for immediate study, along with implications of alternative means of granting concessions--size, length of contract, mechanism for distribution or concession rights, etc.

The system of collecting a fixed stumpage fee per hectare is attractive in that it is administratively straight forward and efficient, once the rate is determined. However the informal sector escapes from the tax, providing an incentive for sawmills to drop marginal areas (or all concessions) and simply purchase logs. It also increases fixed costs of the enterprise, giving a strong incentive to exploit the area more intensively, a likely conflict with SNFM objectives. Gathering needed information to set the fixed rate can also be an obstacle. Collecting on volume removed is preferable, but thought to be administratively complex because of the need to supervise and verify logging operations. It is a system which lends itself to manipulation and graft. However there may be other options which have not been explored. For instance it occurred to the author that stumpage fees (and similar charges for non-timber forest products) could be based on management plans and annual harvest plans. Market prices would be applied to each species in the annual plan, without needing to verify the amount actually taken for fiscal purposes. The verification would instead be done by the forest service and/or certifiers as part of their regular supervision/certification process, on a strictly technical basis, and separately from fiscal activities. This and other alternative schemes can be explored, where the functions involved in technical SNFM are kept separate from fiscal mechanisms and legal disputes.

Another policy issue central to the BOLFOR project is that of land conversion from forestry to agriculture or grazing. Whereas current levels of deforestation are not alarming compared to those in other regions of the tropics, it is not clear where the process of land conversion might stop. Some observers see that most forest lands in Bolivia have few alternative uses, and deforestation is unlikely. Others fear that the values of timber resources might be so low that conversion to other uses, even if unsustainable, might yield higher short-term returns, leading to ecologically disastrous results. Policies are never neutral, and seemingly slight imbalances can tilt the scale easily in one direction or the other.

A third issue mentioned earlier is related to the utilization of a wider number of species, adding value by further processing and reduction of transportation costs by increasing value per unit. The economic feasibility of this strategy should be studied for different situations, depending on distance of the forest production area, the stand of useable trees, and the capabilities of the industry to convert the raw materials into different products.

Export promotion policies and transportation infrastructure will have a large impact on the forestry sector in the future. Priority investments to lower transportation costs for export of forest products should be identified, and put in perspective of other exporting sectors. However the impacts of infrastructure, particularly roads, include colonization and other settlement issues.

Different methods of regulating the use of natural resources by indigenous groups and rural residents in forested areas are employed in other countries. For instance, rather than direct fee-simple property ownership, selected rights of usufruct of resources are sometimes allocated according to the ecology of the area. Appropriate models and experiences should be examined and considered for the future. This approach lowers the taxation or stumpage rights charges that might otherwise be charged to indigenous groups, making a lower-impact use of the resources more feasible.

The informal logging sector is generally considered to be a negative influence on natural resources, causing destruction while generating little benefit. Policies seem to be aimed at limiting or eliminating this sector of the economy. However individual operators might be more able to utilize a wider range of forest products, generating higher value from forest resources. Is there a place for smaller operators and are there positive ways in which they can be brought into the sector?

Forest fire prevention and control is of increasing concern in the Bolivian lowlands. What are the alternatives to provide these services and what are the relative benefits and costs to the forest manager and to the public? Study in this area would help with implementation of the nine existing departmental forestry plans under PAF-BOL.

Besides the distribution and balance of authority at the national and departmental levels, the potential role of municipalities in a SNFM system should be considered. It has been the observation of the author that alarms over specific cases of misuse or destruction of natural resources and the environment in Bolivia have most often been made through municipal authorities. Such cases were observed even before the passage of the Popular Participation Law which empowered the municipalities with geographic jurisdiction and authority, as well as the financial means to strengthen their administrative units and improve infrastructure. Though their responsibilities in natural resource management are limited, municipal authorities might in the future go beyond identifying problems which affect the local population to participate in defining mechanisms of response and defense of resources. Another possible role is that of forestry extension.

As suggested earlier, there are many questions surrounding the certification system which require study. For example, to what extent will FSC become the leader in international certification for the region? Can this approach gain backing of industry? A model worth exploring is CITES, which has become recognized as the international organization responsible for designating endangered species.

BOLFOR has been lauded for its excellent workshops to promote dialogue and strive for consensus on policy issues. Particularly useful was the Workshop for Policy Decision Makers in Sustainable Forest Management, conducted for members of Congress and high level government officials.

The ITTO strategy also makes theoretical sense. Can it become harmonized, or at least made more complementary, with the certification approach?

Other studies envisioned in the project design which would support the process of policy formulation and implementation are:

*Project Related Studies*

- Costs and returns of private sector management activities \*
- Costs and returns of government management investments
- Opportunity costs of sustainable management \*
- Monitoring and evaluation of project investments
- The value of hunted game \*
- Viability of value-added processing
- Viability of community forestry
- Model management plans \*

*Forest Policy Studies*

- Logging profitability \*
- Timber pricing systems
- Concession tenure security \*
- The future of forestry in Bolivia

Topics flagged with an asterisk (\*) are those which BOLFOR has already produced, or has immediate plans to carry out, relevant studies. For example, BOLFOR is currently conducting studies on the costs of administration of the SNFM system: forest inventories, management plans, and audits. An evaluation of the Pausa Ecológica is also to be carried out this year. Finally, the project has been lauded for its excellent workshops to promote dialogue and strive for consensus on many policy issues. Particularly useful was the Workshop for Policy Decision Makers in Sustainable Forest Management, conducted for members of Congress and high level government officials in Lomerío last November.

**D2. Institutional Strengthening**

Whereas the concept of "institutional development" has been used throughout this exercise to refer to improving the overall institutional structure and capabilities in the sector, there are several specific project activities oriented toward particular organizations which require examination. BOLFOR is involved with a large number of public and private institutions in the country and internationally (See Annex I), including the MDSMA and FONAMA at the central level of the GOB, plus the national Congress. The project has also developed technical assistance agreements with CNF, PROMABOSQUE, CDF, CICOL and ETSFOR. Some of these are discussed below.

## **D2a. Ministry of Sustainable Development and Environment--MDSMA**

Within the GOB, the BOLFOR project falls under the Secretaría de Recursos Naturales y Medio Ambiente, and the possible strengthening of the MDSMA and the Secretaría was considered in the design of the project, specifically related to development of the forestry law, and policy dialogue and analysis. As discussed above, the vast reforms being set in motion by the Bolivian government are of paramount importance to the future of the forest sector, and BOLFOR is situated in an excellent position to provide scientific information, technical guidance and facilitate further analysis and dialogue on the many complex issues emerging from such a process. However other projects are also in place for strengthening the MDSMA.<sup>4</sup> It is also important to recognize that the GOB is not the only interested participant in the process of policy formulation. Instead BOLFOR should continue to orient its efforts toward many participating and concerned institutions.

## **D2b. Fondo Nacional del Medio Ambiente--FONAMA**

FONAMA's role in the project is to disburse and monitor the use and impact of public resources, in this case those which derive from the PL 480 program. Although a public institution, FONAMA will gain greater independence of the MDSMA with the formation of an independent Board with membership chosen from the public, rather than representation from government agencies. The concept of FONAMA is to become a conduit to capture and channel additional resources to areas related to natural resource management and the environment. Therefore, proposals for new projects should be closely coordinated with FONAMA.

## **D2c. Cámara Nacional Forestal--CNF**

The CNF functions both as a national and regional spokesperson for the forest sector, focusing primarily on issues affecting the lumber industry. Issues surrounding sustainable management are only recently entering into the policy deliberations formulated and promoted by CNF, thanks in large part to BOLFOR technical assistance.

A recent example of such support is BOLFOR participation in a CNF-UPSA study commissioned to look at the importance of forestry sector in Santa Cruz, Beni and La Paz. The study will identify the main enterprises--primary, secondary and commercial--and gather data on employment, salaries, sales, resource utilization, exports, concessions, management plans, and needs for assistance. It will provide a brief diagnosis and highlight importance of sector. The Cámara Forestal de Cochabamba may undertake a similar study soon.

## **D2d. PROMABOSQUE**

PROMABOSQUE is the technical arm of the Cámara Nacional Forestal (CNF), which began with a tree nursery program several years ago. Today, PROMABOSQUE sees the

---

<sup>4</sup> The ETAP project of the World Bank is scheduled to end in 1997, and a new project financed by the Interamerican Development Bank to strengthen the MDSMA should start up about the same time.



institution playing an important role in providing support to industry and forest enterprises, including topics related to SNFM.

### *Silviculture*

Nurseries  
Seed Bank

### *Procedures for SNFM*

Geographic Information Systems  
Inventories  
Forest Management Plans

### *Forest Industries*

Business and Industrial Assessments  
Quality Control  
Technology  
Environmental Impact Assessments  
Industrial Security

In addition, PROMABOSQUE is forming an information service, with a library and GIS laboratory which would support SNFM activities. It also participates in a small economics unit together with the CNF. To avoid duplications with other organizations, PROMABOSQUE would not enter into fields related to market development and international trade.

BOLFOR developed a strategy to improve the administrative capability of PROMABOSQUE, including operating plans, operations manuals, and improved administrative and financial systems. Continued assistance is provided through the BOLFOR administrative unit. In August 1996, PROMABOSQUE will begin implementation of a development project to provide assistance to the industry. Three firms have been chosen to receive assistance--CIMAL, Marabol, and San Martín--and the project will also assist in developing an export consortium with Moira and La Chonta.

PROMABOSQUE receives funds from services, mostly sales of nursery plants, donations, and voluntary quotas from the forestry sector. Beginning in 1993, the forestry sector of Santa Cruz established a voluntary system of contributions to support PROMABOSQUE and to finance SNFM activities with a 50 percent voluntary surcharge over stumpage rights. Of this, 15 percentage points generated about \$70,000 in 1995 to support the general PROMABOSQUE budget. Collection is made by PROMABOSQUE in the offices of CDF at the moment stumpage charges are paid. The remaining 35 percentage points or roughly US\$200,000 are not actually collected into a fund, but are instead "available" through individual enterprises and should be used for SNFM and for replanting. The rationale for this system is to induce the industry to set aside the resources needed for developing forest inventories and management plans, and for periodic supervision or audits.

Some of the SNFM services that will be needed by the industry in the future could be provided by PROMABOSQUE. The client would be charged the additional costs of the services in each case. However it is envisioned that the needs will be great and that ample growth of private consulting in this area will also occur.

Strengthening PROMABOSQUE to provide technical services to CNF members in SNFM has been defined as a goal of BOLFOR. The project may employ two professionals to add to the current technical staff of eight. Although as an industry organization, its primary mission must always be guided by economic realities, given the right orientation and structure, PROMABOSQUE can be a viable source of direction and technical support to SNFM activities in the country. The inclusion of three GOB representatives in its board of seven members provides the institution an institutional platform balanced with national and public concerns. It is not in the best interest of the sector, however, to form a monopoly over SNFM services in a single industry organization, no matter how positive its outlook and open its organization. Participation of private consulting firms, independent international certifying organizations, and government regulators will maintain a level of competition for funding, access to information and technical/scientific inquiry.

#### **D2e. Cámara Nacional de Exportadores--CADEX**

More than 40 percent of CADEX's 150 members are from the forest sector, yet the sector demands fewer services than many others. CADEX assists with transportation plans and definition of export corridors, and has developed a project to establish quality control lab with the Cámara de Comercio and the Cámara Agropecuaria del Oriente.

A 1989 national study conducted by CADEX under a project with ITC determined priorities and opportunities for exports, placing wood and wood manufactures on top. The project focused on areas such as cost control, value added, low technology, market identification and promotion.

CADEX will soon become a provider of INTERNET for its users, and will establish a commercial network. BOLFOR is currently exploring further possibilities with CADEX, such as financing studies on marketing costs, production costs, international prices and trade. The strategy is to strengthen CADEX through carrying out the studies. CADEX has also promoted development of a project with ITTO manufacturing, which includes costs of production and marketing logistics and physical distribution.

#### **D2f. CICOL**

The Lomerío area was selected for project support as an example where indigenous peoples can become more involved in SNFM. It is hoped that a model of organization and management might emerge which would be applicable to other similar situations. CICOL is a federation of Lomerío community groups. While the latter are owners/managers of the forest resources, CICOL operates a sawmill and with support of a non-governmental organization, APCOB, provides support to the communities. BOLFOR has provided assistance to CICOL for

restructuring sawmill operations, which operate at a loss. Concerns continue regarding the viability of the sawmill as well as the pressure on wildlife due to hunting by Lomerío residents.

#### **D2h. Centro de Desarrollo Forestal--CDF/Santa Cruz**

The Administrative Decentralization Law is being put into practice as of this writing, with questions raised at the same time about the relative authority at the central and departmental levels. Despite the ambiguity and on-going debate, departmental administration must proceed with efforts to organize forest services. BOLFOR has worked closely with CDF in Santa Cruz from the beginning of the project, and continues to provide technical guidance during the on-going process of institutional definition.

---

## SECTION IV

### AN INSTITUTIONAL DEVELOPMENT STRATEGY FOR BOLFOR

---

#### A. Priorities Central to Achieving Project Objectives

The goal and purpose of the BOLFOR project were reviewed in Section II to provide the background and orientation in support of the conclusions formulated below. The central thrust of the project is to achieve sustainable NFM through voluntary certification and market incentives, thereby reducing degradation of natural resources and the environment. Other efforts to strengthen SNFM through cooperation with government institutions were allowed from the outset of the project, and it is now increasingly clear that the need for technical orientation and support in this regard is very great. While a single project such as BOLFOR cannot afford to disburse its efforts and resources to simultaneously support all of the functions that make up the institutional fabric of the forestry sector, it will need to contribute on a number of fronts.

The central theme of BOLFOR will always be sustainable natural forest management, of which continued research forms an integral part. Enhancement of market incentives, through improved utilization and value added to forest products, voluntary certification, and other mechanisms, render the efforts in NFM more feasible in practice.

Given the unique opportunities provided through the reform initiatives being taken by the Bolivian Government, and the very great needs for technical input and orientation, BOLFOR support toward policy analysis and dialogue, and institutional development is highly justifiable. Institutional development in this context is meant in its broad sense: that of identifying roles, levels of authority, and mechanisms to improve performance of the forest sector. Technical assistance in the creation of the new forest service would also compliment the NFM objectives of the project.

Contributing to institutional sustainability of management systems in any of the above areas depends on creating a critical mass of professionals and qualified technical personnel.

The areas highlighted above form the central focus of the BOLFOR project, and form the basis for the first of four criteria for determining future "investments" in institutional development for the project.

#### B. Criteria for Providing Support to Future Activities

As part of the institutional development strategy for the project, criteria to determine the priority of future "investments" are proposed. The criteria for or against providing support to any given activities emerge in large measure from the way the project envisions the contribution it can best make and the means in which it will eventually be evaluated. The criteria were discussed in a half-day workshop with the BOLFOR staff, in which a general consensus was reached.

Four different criteria are proposed. The first relates to the list of functional areas identified in Section II which served as a guide to the analysis of current activities which was discussed in Section III. It consists of a prioritization of functions which should receive project support based on the central focus and logic of the BOLFOR design on the one hand, and the need to support the reform initiatives of the government on the other. The project must provide support on a number of fronts, therefore the first three levels out of four identified all become priority. The second criteria is based on the concept of sustainability of institutional "investments," and is broken into three levels. The third criteria places emphasis in the interchange of ideas and information in international forums. The fourth covers practical issues such as avoiding duplication, remaining within budget, and assuring objectivity in provision of assistance.

The four criteria are presented below in order of importance, with criteria #1 being more important than #2, criteria #2 being more important than #3, etc. Finally, a summary of the four criteria is presented, before entering into specific recommendations for institutional development activities of the project.

#### **B1. CRITERIA #1: Strengthen Activities Most Central to the Focus of BOLFOR**

First: BOLFOR should be primarily concerned with the functions most central to the strategy and focus of the project, particularly research, SNFM, and product development:

- C Research to identify the practices and standards to carry out sustainable management of natural forests and protect biodiversity.
- C The applications of recommended practices by forest operators, including harvest limited in volume and balanced among the available species.
- C Improvement of the quality and competitiveness of forest products to penetrate niche markets, including markets which require the green seal.

Interestingly, some of the major institutional weaknesses identified earlier are precisely in the areas where BOLFOR has more at stake. Some examples are: 1) Mechanisms for identifying sources and assigning research funds in the forestry sector in Bolivia, especially for natural forest management, depend on the priorities and limitations of a few organizations acting independently. 2) The practice of natural forest management was virtually non-existent before the BOLFOR project was initiated. 3) Logging is based on a few high-valued species, and enterprises have little experience in secondary processing to add value and increase competitiveness in international markets. 4) Finally, international certification mechanisms are still in their formative years, and have not yet been incorporated into a workable marketing system.

Second: BOLFOR should provide support to activities related to the definition of the political and general institutional framework related to the forestry sector in Bolivia:

- C Policy analysis and dialogue
- C Institutional analysis and development

Again, the term "institutional development" is used in this global context to refer to defining the role of the state, authority delegated to decentralized levels, mechanisms of participation at the local level, and rights over the use of natural resources. This includes themes such as indigenous groups, and regulatory systems governing SNFM.

Third: The formation of human resources, which is fundamental for the development of greater institutional capacity throughout the sector in the short and long term should be promoted.

- C Training at the graduate level
- C Local university degree training
- C Other training at the level of technicians, short-term training, and on-the-job training

The strategy of forming highly qualified professional personnel to carry on the various activities and remove a key bottleneck in institutional development is a partial solution. However, BOLFOR is not designed to strengthen institutions such as universities which train additional professionals for the future.

Fourth: Activities having lower priority under this criteria are: enterprise development, national-level forestry mapping and monitoring, and public awareness campaigns. Fortunately there are other projects which provide these kinds of support in Bolivia.<sup>1</sup>

## **B2. CRITERIA #2: Sustainability of Investments in Institutions**

First: Priority should be given to investments that contribute to the establishment of functioning institutional systems which will be adapted over time in accordance with local needs and conditions in relation to:

- C Financing levels, sources, and mechanisms
- C Political and market incentives which give rise to initiative and action
- C Human resource capabilities
- C Popular awareness and participation
- C Definition of rights and balance of regulatory controls

This approach argues in favor of providing technical orientation to all institutions involved in the forestry sector in general, rather than focusing project support toward strengthening

---

<sup>1</sup> For instance, PAF-BOL has produced forestry plans, and the IDB project to strengthen MDSMA mentioned earlier includes forestry monitoring.

specific organizations.

Second: Specific project activities which lead toward the development of institutional models and initiation and demonstration by example--including research in SNFM, the BOLFOR library, feasibility studies regarding new products and markets, and SNFM carried out by indigenous groups such as CICOL--are given second priority.

Third: Investments which imply simply the transfer of resources to strengthen existing organizations--purchase of vehicles or computers, etc.--are less justifiable under the criteria of institutional sustainability.

### **B3. CRITERIA #3: Contribution to International Awareness and Dialogue**

Although BOLFOR was not designed to strengthen international trade and certification systems and guide the formation of the policies of international organizations, the future of the Bolivian forest sector and the success of BOLFOR depend to a large degree on these levels. It is important for BOLFOR to be an active player and participate in activities which orient decisions of international organizations related to:

- C Certification and green labeling
- C Other mechanisms to promote SNFM through trade agreements
- C Awareness of the international community about the forestry sector and SNFM practices in Bolivia
- C Policy dialogue in other countries: both producing and consuming nations

### **B4. CRITERIA #4: Interinstitutional Coordination**

BOLFOR should avoid investments which might simply result in replacing other sources of funding. Examples of such sources are:

- C Other development projects
- C Private sector
- C Various agencies of the Bolivian Government

The strategy employed by BOLFOR of co-financing activities such as research, seems to be a positive influence causing other organizations to increase their investments in SNFM activities.

Given the great demand for assistance, BOLFOR must also avoid uses of resources which go beyond the budgetary levels available through the project. The project should be limited primarily to technical assistance and training of human resources, as conceptualized and budgeted in the project design.

Finally, the project should avoid investments which might contribute to unnecessary bias or preference for one organization over another of the same kind. Direct support to any particular forest enterprise, indigenous group, departmental administration, municipality, or

other, should be carried out as models, case studies, or pilot programs, which will serve as examples to be built upon elsewhere, benefitting the entire sector.

## **B5. Summary of the Criteria for Undertaking Future "Investments" in Institutional Development**

### **Criteria #1: Strengthen the functions most central to the project**

*First:* High priority to functions most central to the strategy and focus of the project, particularly research, SNFM, and product development.

*Second:* Priority to activities related to the definition of the political and general institutional framework related to the forestry sector in Bolivia.

*Third:* The formation of human resources, which is fundamental to the development of greater institutional capacity throughout the sector in the short and long term.

*Fourth:* Low priority under this criteria to activities such as: enterprise development, national forestry map and monitoring, and public awareness campaigns.

### **Criteria #2: Sustainability of institutional investments**

*First:* High priority to investments which contribute to the establishment of functioning institutional systems.

*Second:* Priority to activities that lead toward the development of replicable institutional models for demonstration and adoption.

*Third:* Low priority to investments which imply simply the transfer of resources to strengthen existing organizations.

### **Criteria #3: Contribution to international awareness and dialogue**

Priority to activities which orient decisions of international organizations.

### **Criteria #4: Interinstitutional Coordination**

Avoid investments which might simply result in replacing other sources of funding.

Focus primarily on provision of technical assistance and training of human resources, to remain within the budgetary resources assigned in the project design.

Be objective in supporting investments in any given organization over another of the same kind.



## **C. Recommended Institutional Development Strategy**

### **C1. General Observations and Recommendations**

The environment in which the project is being executed is far from static. With or without a new forestry law, consensus on some issues will emerge and policies will evolve. BOLFOR has already had a profound influence in the national context where SNFM is becoming accepted as a necessity, where only a short time ago the term was scarcely thought of. The GOB is leaning toward a mandatory system of natural forest management in which government regulation will play a part. Once in place, many of the current targets and projections of BOLFOR may need redefinition. For example, if all forest lands in Santa Cruz are placed under management plans, then BOLFORs' target of placing 25 percent of the production forests in Santa Cruz under sustainable forest management may no longer apply. With the definition of the responsibilities of the new forest services, BOLFOR may also see a need to expand its geographic coverage to provide technical support in the formation of forest services in the five departments which have forest concessions. With the new land tenure law, private property owners may become forest managers as well, which could place new demands on the government and others, including BOLFOR, to provide technical support and orientation. The recommendations below are made with the idea in mind that project services need to be adjusted according to the opportunities and environment, while maintaining the integrity of the project design and focus.

Geographic coverage of BOLFOR was not included as a criteria for selection among alternative institutional "investments." Instead it should be clear that the choice of activities will determine the issue, as suggested in the previous paragraph.

The analysis throughout this document leads to the conclusion that BOLFOR should continue technical support to the sector in general, rather than setting out separate targets and objectives to strengthen individual organizations. The project will not succeed in meeting its purpose simply by leaving behind a "strengthened" MDSMA, CICOL, PROMABOSQUE, UAGRM, FONAMA and CDF. For SNFM to become practice in Bolivia, many other organizations, including all the above plus concessionaires, CFV, private consultants and others must all be involved in a system with support of industry and the general public through democratic institutions at various levels. Providing support to a few selected organizations may seem like an attractive alternative to focus institution building efforts, but this strategy can absorb a large amount of resources and distract the project from more serious issues. BOLFOR should strengthen natural forest management and biodiversity conservation, market incentives, and the policy/institutional framework, along with human resource development. The proof that institutions are stronger will not be based on number of technicians trained and investments in equipment but instead that forests are sustainably managed, and that critical functions in the system are being successfully carried out.

## **C2. Specific Recommendations**

The following recommendations are more specific, with reference to institutions and functional areas. If adopted by the BOLFOR project, some adjustments may be appropriate in the specific plans of action within each area.

- C Policy analysis should be expanded to include some of the high priority studies regarding land conversion, utilization of multiple species, and others. The building of a sound base of technical knowledge and analysis will help shape policy well beyond the end of the project. Participants in policy formulation, in addition to government, include the scientific community, decentralized public agencies, industry representatives, and many others. Policy studies should be shared with all interested participants.
- C The GOB should consider establishing a natural resources and environmental policy analysis unit similar in organization to UDAPE and UDAPSO, or perhaps broadening the mandate of UDAPE to include natural resource management. USAID should support this effort, initially through the BOLFOR project. (UDAPE may already be moving in this direction.)
- C The project should support measures to define new mechanisms and initiatives for research in SNFM. This process can be initiated by creating a forum to discuss the development of a multidisciplinary research agenda in support of SNFM systems to be shared among concerned organizations. Research on ecological indicators and their relationship with required management practices should be included.
- C The mechanism established by the CNF to provide financing to PROMABOSQUE and SNFM should be further explored and built upon. For instance, a portion of this funding could be designated to provide support for research.
- C The support to CICOL in Lomerío has helped the project maintain a balanced appreciation of the interdependence of indigenous groups and their organizations with the natural environment. Although many useful insights will be derived from the work in this area, it is not likely that a single model for managing resources through local organizations will emerge. The project should not be judged on the success or failure of any particular enterprise, organization, or management scheme, but instead should do comparative studies with other groups in varied situations to provide a better understanding of the issues and alternatives.
- C Product development and quality control are important to meeting project objectives. Enterprise development per se is not. Again, BOLFOR should not be judged by the success or failure of particular enterprises. The project should maintain the criteria of working with those firms that undertake sustainable forest management.
- C Studies on certification strategies should be high priority, and the project should

help the GOB prepare a report for the Cumbre de las Américas to be held in Santa Cruz in December, 1996. It is not necessary that a decision be pending with participating countries; the report can instead be made simply for information and promotion of the concept.

- C Continue to provide orientation and interface internationally at conferences and meetings, including scientific and industry forums. Facilitate international communications and networking for institutions related to the project, especially PROMABOSQUE, UAGRM, and CDF.
- C As planned for 1996, studies should be conducted to estimate costs of SNFM, both the administration of the system and the costs of compliance with the required measures. These studies need periodic updating and expansion to include the costs of SNFM under voluntary certification programs and SNFM independent of certification. Inspectors and regulators need to be cognizant of the costs their recommendations and requirements imply for the operator.
- C Documentation centers at regional and national levels should be identified to receive copies of relevant documents produced or obtained by BOLFOR. In select cases, technical support should be given in the organization and operation of libraries and data bases to ensure the maintenance and availability of the information.
- C The project should continue to assist in the dialogue and analysis leading to the formation and development of the forest service, involving efforts on two fronts: 1) definition of policy, levels of authority, and regulatory and fiscal mechanisms to be applied toward the sector, and 2) practical aspects of structure and organization of a technical forest service. The first of these is coupled with general policy definition for the sector, and must therefore be nation-wide in scope. Regarding the more practical and specific technical aspects of forming and operating a forest service, BOLFOR should limit its support to creating a model in Santa Cruz<sup>2</sup>. The relationship with other services in the environmental area, such as wildlife protection and territorial planning and zoning, need to be considered.
- C Institutionalization of the Geographic Information Systems Laboratory will be less of a concern as time goes on. Services of this kind are proliferating as the initial investment becomes more manageable, and the demand grows along with the number of trained personnel. The role of the Laboratory in terms of setting standards and procedures for forest management plans is shared between private (certification) and public (regulatory) systems. CFV and PROMABOSQUE on the private side, and the new forest service on the public side are likely participants

---

<sup>2</sup> An exception might be made if the GOB passes legislation clarifying the responsibilities of the regional forest services and requires specific assistance in their formation.

in the process. In its capacity as a training facility, the local university through CIMAR, should play a role. Final ownership of the equipment should be vested in the public sector, given that it has less access to financing outside of development projects such as BOLFOR.

- C Assist in the technical orientation among consulting firms and build their capabilities to undertake forest inventories and management plans through workshops and other short-term training.
- C BOLFOR should assist the GOB in the identification of new projects which will certainly be needed in future years as resource management takes hold in Bolivia.
- C It is suggested that BOLFOR work with selected municipalities in areas where the project is especially active.
- C Support increased policy dialogue, including technical input to public awareness campaigns.

### **C3. Comments on 1996 Work Plan**

As a continuation of specific recommendations, a cursory review of the 1996 BOLFOR Work Plan generated additional ideas on project activities related to institutional development. The consultant was not present during the development of the Work Plan, and because of time limitations, he did not review it with BOLFOR staff. Therefore some of the points below are phrased as open questions, rather than as recommendations. For ease of reference, the Roman Numerals are those from the Plan. Since only those points in the Work Plan with relevant comments or questions are listed below, the reader will note some skips in numbering.

---

## **Policy analysis and Institutional Development Component**

---

### **Subcomponent: Forestry Law**

- I The Forestry Law is important because it reflects policies and clarifies levels of authority within the government. BOLFOR's influence over the law will be considerable with the very active participation of the COP in policy dialogue. Both for the Law and further inputs on policy, further policy and socio-economic analyses will be needed.
- II and III Regulations are technically oriented toward administration of concessions. Since management plans will likely be required even without a new law, the efforts on developing regulations, including the studies to support them, could be carried out independently of the passage of the Law.
- IV Forest Public Policy Dialogue seems like an activity that could be constantly promoted, independently of the passage of new legislation. Implementing this activity through the GOB will, however, limit the dialogue, because of the need for

the SSRRNN to state the official policy. Many USAID development projects work on policy alongside, but not through, the host government. This approach is suggested for BOLFOR.

- V Documentation on Policy for Public Consumption is coupled with the above. Does BOLFOR have the funds for this activity, or are there other organizations that can become involved? Certainly some local organizations such as CNF should participate, but perhaps other international groups might contribute as well.

#### Subcomponent: Certification

- I Establishing CFV is fundamental to the project. The activities include promotion, identification of financing mechanisms, and international networking. Further study and examination of alternative mechanisms at the international level, especially related to the ITTO approach and government regulation of SNFM, are recommended, especially with regard to how those systems might interface with certification systems. Also needed are studies on the significance of economic incentives that the certification mechanisms might provide to the forest operator.
- II. Formation of the first local certifying agency. The options identified as possible certifying organizations are quasi-public institutions. This should change in time.
- III Two initial products exported. In the spirit of the project, it is clear that these refer to products exported from sustainably managed forests, which may or may not enter into the certification system. That is, although the forest is certified, the individual products may or may not be marketed under a green label. The concern of the project is forest resource management and biodiversity, not a particular marketing scheme per se.
- IV A second and possibly third certifier identified. The private sector may offer a viable alternative if there is a market for services. Priority should be given to including private firms or organizations at this stage. As a model, we need serious institutions, but we also need ones that will continue to lead after BOLFOR ends. To what extent does FSC (or other) oversight of the certifier provide a guarantee of the quality of services?

#### Subcomponent: Institutional Strengthening

- I CDF or SERFOR--Structure and Technical Operations. Besides the steps mentioned, BOLFOR is helping define some alternatives for development of a forest service through deliberations over the proposed Forestry Law. While the Law is under deliberation, perhaps the project could get authorization to proceed to create a provincial model.
- II Data Base. This probably relates to forest monitoring, and might be thought of in a larger context with the future IDB project.

- III, IV, V PROMABOSQUE seems well positioned to carry out some important leadership roles in technical fields, including products and SNFM. The financing mechanism put into place by CNF needs serious consideration, as a mechanism of this kind will undoubtedly be needed for research and other services. The way an organization of this kind sets its priorities is by having its membership place demands on the organization for services, with high performance standards. With BOLFOR support, the industry would be wise to get PROMABOSQUE moving quickly in product development and SNFM.
- VI A Forest Management Fund seems to be in the spirit of the mechanism instituted by the CNF. Funds are not actually collected and pooled, but are theoretically available through each enterprise.
- VII CICOL has been important to BOLFOR, but placing too many eggs in one basket can present risks to the project. If CICOL and the sawmill were to fail, would it be considered a failure of BOLFOR? Is it possible to carry out some of the diagnostic studies with other groups as well?

Subcomponent: Research

- I The Studies identified here are very much needed. Some relate to policy issues.
- II Lomerío study on benefits of forests seems like an important topic. It might compare forestry with other possible uses of the resources.

Component: Administration

Subcomponent: Monitoring and Evaluation, Networking, and Data Bases

- III Some Data Bases seem to be set up for CICOL. Are these to be transferred to CICOL later on, or to APCOB? Can we help other forestry libraries in the universities and elsewhere.

Subcomponent: GIS Laboratory

- I Training in this area is very worthwhile, and should occupy the majority of resources and time at the laboratory. Efforts to inform the general public about GIS may not be necessary.
- II CIMAR, the new forest service and PROMABOSQUE do indeed seem to be the natural targets for GIS support, at least initially from BOLFOR.
- III Does the BOLFOR GIS laboratory have to do all of this, or can some of this work be contracted out to CIMAR, private firms, or to PROMABOSQUE when they get their laboratory started later this year? The BOLFOR laboratory could then concentrate

more on training and setting standards and procedures.

Component: Products and Markets

Subcomponent: Wood Products

- II. Certification Custody. Is there an organization other than certifiers and forest enterprises that would eventually take the responsibility for the custody of certified products?
- III. Can Chemonics/Washington play a role here more efficiently than local staff? Several people are familiar with markets and industry.
- IV. CICOL sawmill may still be a good example of a small sawmill operation for the project to work with. Again the issue arises as to how far the project should go, will the effort help the industry in general, what happens if this particular business does not get on its feet? Businesses that have too much outside help often fail to make the difficult internal adjustments, or simply admit they are not competitive and restructure, sell out or quit. Lomerío communities could still potentially manage forests and sell forest products without running their own sawmill through CICOL.
- V. Enterprise development should be oriented to helping forest enterprises better utilize more species: improving products, quality control, and efficiency. The overall well being of individual enterprises should not become an objective of BOLFOR.

Subcomponent: Non-timber Products

What institutions can be potentially active here? Assuming PROMABOSQUE will not take a role, are there others related to Brazil nut or cusi?

Subcomponent: Research and Subcomponent: Training

The orientation seems very consistent with that proposed above--improve enterprises in order to become more competitive with better products. However the dedication of resources to CICOL crops up once more.

Component: Natural Forest Management

Subcomponent: SNFM Practices

- II-XII. Activities to prepare SNFM plans in various concessions. The agenda is daunting, and the amount of effort required will undoubtedly be very great. It is not clear how much of the financial burden will be carried by the forest operator, and how much subsidy is implicit in BOLFOR assistance. This should be dealt with soon, to avoid misunderstandings later on. It might be a good time for the concessionaires to hire some of the work done by CIMAR, PROMABOSQUE, and private firms, and for

BOLFOR to provide technical support and orientation to the effort.

- XIV. Prepare and distribute a forest inventory software package sounds consistent with the idea of getting other providers of services involved.
- XVIII. Help in consolidation of property rights in Lomerío seems like a great activity for APCOB, rather than for BOLFOR.

#### Subcomponent: Research

Here is where BOLFOR might take the lead with concerned organizations at the national level to lay out a research agenda--one year, five year, and long-term--in support of SNFM. Of course social and economic research should be included, but biological research should probably take the lead.

#### Subcomponent: Training

At least four of the activities in this component emphasize international networks, interchange, and forums of discussion, which are important aspects of training.

Again resources are focused on CICOL, but another activity is to disseminate information on SNFM throughout the Chiquitanía. This approach seems more balanced.

### **D. Results-Oriented Monitoring and Evaluation**

Consistent with the conclusions and recommendations of this analysis, indicators of institutional strengthening are not to be found within each of the individual organizations with which the project works, but instead in the effective implementation of SNFM systems throughout the forestry sector. The evidence that the capacity to carry out such programs has been strengthened is, ultimately, that the various functions are being carried out in a systematic manner. Therefore it becomes somewhat arbitrary to distinguish between indicators of increased institutional capacity versus indicators of overall project impacts.

The methodology for definition of impact indicators of institutional capacity proposed for BOLFOR is composed of three categories:

- C Indications that the institutional structure and systems are becoming established to carry out the primary functions involved in the management of natural resources in the forestry sector.
- C Quality characteristics clarifying the level of effectiveness to which the relevant functions are being carried out.
- C Measurements showing the continuation (sustainability) of activities after the BOLFOR project is completed.



As discussed earlier in this document, Bolivia is at a point in time where SNFM was near zero at the beginning of the BOLFOR project, but given the ample reforms being implemented on many fronts by the Bolivian Government, the expectation is that policies and institutional responsibilities will be defined. Also the private sector is expected to undertake SNFM practices, implement an international certification mechanism, and make the investments to utilize a wider array of species. The first category of indicators are generally quantifiable, although suggesting the appropriate numbers goes beyond the scope of this report.

The second category allows for options defining the quality, effectiveness, coverage, or other characteristics related to the nature of the functions and systems defined earlier. Many of these characteristics are not intended to be measurable, but it appears that a surprising number of them do lend themselves to quantification if so desired.

The third category of indicators is the most relevant for the future, especially as the project moves beyond the initial phases in which management, certification, and new regulatory and technical services are being established. The method of measurement is simply to verify that the levels of activity in a given area continue to be carried out at a similar or other targeted level as project support lessens and eventually ends. For instance, if the research agenda needed to support the SNFM activities estimates a minimum of 10 studies per year, and that number is carried out with BOLFOR support, then the task of monitoring and evaluation is to determine if that same number of studies continues to be carried out in the future without BOLFOR support.

On a parallel line, the coverage of forest inventories, management plans, and performance audits each year in Bolivia indicates that the capacity to regulate sustainable forest management practices is in place and operating.

The first three categories or functional areas are those most central to the BOLFOR design, whereas the additional three are related to the sector in general, and are more dependent upon decisions of international organizations, private sector leaders, and policy determinations of the Government of Bolivia. Therefore the degree to which BOLFOR can influence the outcome in the first three categories is greater than for the latter three.

SYSTEM/STRUCTURE IN PLACE	QUALITY CHARACTERISTICS	CONTINUATION BEYOND BOLFOR:SUSTAINABILITY
<b>Research:</b>		
<p>Local institutions conducting research to support SNFM based on an agenda showing needs and priorities.</p> <p>Financing mechanisms defined.</p> <p>Library and documentation centers identified.</p>	<p>Ecological research and socio-economic research included in the research agenda.</p>	<p>Number of research projects carried out each year, according to an agreed upon research agenda.</p> <p>Research reports given wide distribution.</p> <p>Data bases and library materials maintained and available to users.</p>
<b>SNFM Practices:</b>		
<p>Forest operators actively engaged in SNFM.</p> <p>Organizations providing services: inventories, management plans, and audits.</p>	<p>High level of compliance with accepted plans, verified through periodic audits.</p> <p>Ecological and social indicators included in management plans.</p> <p>Competitive environment for provision of services.</p> <p>Recognized quality of services, gaining credibility both locally and abroad.</p>	<p>Assuming the GOB does not require management plans, the indicator should be in terms of expanding number of enterprises applying practices and area under SNFM.</p> <p>If the GOB requires management plans for all production forests, the targets should be in terms of the quality indicators in the center column.</p>
<b>Products and Markets:</b>		
<p>Enterprises make investments and adjustments to use a wider range of species subject to forest harvest plans.</p> <p>Increased profit margin on products from new species, derived from greater value added, increased efficiency, higher quality, and/or lower transportation costs.</p>	<p>Less incentive to "mine" higher value species leading to their possible extinction.</p> <p>Increased value of forest resources and greater interest in forest production, as opposed to conversion to other uses.</p>	<p>More enterprises utilizing a broader range of species.</p> <p>Higher volumes and values of products from wider range of species.</p> <p>Higher margins maintained or improved.</p>

<b>Certification Mechanism:</b>		
<p>CFV set up and operating in representation of FSC and possibly others.</p> <p>Local organizations accredited as certifiers.</p> <p>Concessionaires, landowners, and forest enterprises certified.</p>	<p>Marketing advantages as a result of the green label provide incentives to continue and improve SNFM practices.</p> <p>High rate of success in attaining certification and continuing to meet norms.</p> <p>Involvement of indigenous peoples and other rural residents.</p>	<p>Coverage of certification as a percent of all production forests.</p> <p>Volume of products marketed under the green label.</p>
<b>Policy Analysis and Dialogue:</b>		
<p>Policy analyses and studies.</p> <p>Forums for dialogue and discussion.</p> <p>Specialized unit formed to carry out natural resource policy analysis.</p>	<p>Key issues, including social aspects, addressed in policy debate.</p> <p>Increased public awareness of the issues and importance of biodiversity.</p>	<p>Number of policy studies carried out each year.</p> <p>Continuing forums for discussion of policy.</p> <p>Passage of the Forestry Law and Regulations or other binding definitions of public policy.</p>
<b>Public Regulation:</b>		
<p>System adopted and applied to regulate SNFM.</p> <p>Forest Service established with field presence.</p> <p>Budget and operating systems established.</p>	<p>Clarity of roles among GOB agencies.</p> <p>Separation of policing, taxation, and technical functions.</p> <p>Promotional style to improve SNFM practices.</p>	<p>Forest inventories, management plans, and audits carried out on relevant forest areas as required.</p> <p>Non-wood products included in management plans.</p> <p>Monitoring of forest resources and biodiversity.</p>

Naturally the connection between project inputs and ultimate impacts is subject to interpretation, particularly in areas such as policy dialogue over which the project has no direct authority. Therefore defining impact indicators only sets the stage upon which the project can be evaluated. Because BOLFOR is designed to operate at the field level, directly with the private sector, the university, and others at the regional level, and is also well positioned to contribute to the formulation of national policy, the project works at several levels:

- C It can carry out some activities directly to demonstrate by example, gaining credibility and momentum. Examples are research, GIS laboratory, and training.
- C It influences other institutions to engage in activities which further SNFM activities and functions. Joint policy studies, forming CFV with other organizations, assisting CIMAR to become a certifying body, and assisting enterprises to expand product lines are examples.
- C The project can propose institutional systems and policies which support SNFM. These range from examining alternatives for the organization of the forest service, to the forestry law.

Ultimately, project implementors can only be held responsible and judged upon the activities they carried out, the strategies they employed to involve and influence other organizations, and on the quality of the proposals they formulated and recommended. However the decision to invest in a project is based on the expected final impacts and benefit/cost relationship resulting from a project. It is clear that BOLFOR is already having a strong influence in the forestry sector in Bolivia, and the practices involved in SNFM will become more prevalent with heavier participation of both the public and private sectors. Therefore it seems reasonable to focus on establishment of the structure and continuity of activities as proposed above as results-oriented indicators for the BOLFOR project.

---

## ANNEX I

---

### ORGANIZATIONS CURRENTLY INVOLVED WITH BOLFOR

---

Ministerio de Desarrollo Sostenible y Medio Ambiente (MDSMA)  
Secretaría Nacional de Recursos Naturales y Medio Ambiente (SNRNMA) of the MDSMA  
Dirección de Aprovechamiento Forestal (DAF) of the SNRNMA  
Fondo Nacional para el Medio Ambiente (FONAMA)  
Secretaría Ejecutiva del Programa PL480  
Centro de Desarrollo Forestal of Santa Cruz (CDF/Santa Cruz)  
Laboratorio Nacional de Productos Forestales (LABONAC) of CDF/Santa Cruz

Cámara Nacional Forestal (CNF)  
Programa de Manejo de Bosques y Reforestación (PROMABOSQUE) of the CNF  
Cámara de Exportadores (CADEX)  
Various Enterprises, Concessionaires

Universidad Autónoma Gabriel René Moreno (UAGRM)  
Museum of Natural History Noel Kempff Mercado of the UAGRM  
Centro de Investigación y Manejo de Recursos Naturales Renovables (CIMAR) of the UAGRM  
Universidad Mayor San Simón (UMSS) of Cochabamba  
Escuela Técnica Superior Forestal (ETSFOR) of the UMSS  
Instituto Ecológico of the Universidad Mayor San Andrés (UMSA) or La Paz  
Universidad Autónoma Juan Misael Saracho (UAJMS) of Tarija

Centro Intercomunal de Campesinos del Oriente de Lomerío (CICOL)  
Apoyo para el Campesino del Oriente Boliviano (APCOB)  
Fundación Amigos para la Naturaleza (FAN)  
Various NGOs

Consejo Boliviano para la Certificación Forestal Voluntaria (CFV)  
SMART Wood, Green Cross  
Forestry Stewardship Council (FSC), Rainforest Alliance

Departmental Administration and Municipalities  
Community groups and rural residents